

Work Order ID 88528

88528

Page 1

August-02-12 11:50:19 AM

Item ID: D3965-4 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Bearing, Spherical
 Start Date: 7/10/12 Start Qty: 10.00 ***10*** Cust Item ID:
 Required Date: 8/17/12 Req'd Qty: 10.00 ***10*** Customer:
 Reference:

Approvals: Process Plan: MLJ Date: 12/08/09 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3965	B								

100 0.00

100

Purchasing

Purchasing

Memo

PURCHASING

Issue P/O: 17650

Purchase Part Number: 63215K52

Possible Supplier: McMaster

Material release note is required

0.00

CL 12/08/10 (10)

110 Receive & Inspect for Damage & Mat'l Certs 0.00

110

Packaging

Packaging

Memo

0.00

10x SP
12-8-13

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION <div style="display: flex; justify-content: space-around;"> <div> Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/> </div> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>		AGAINST DEPARTMENT/PROCESS						
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector			
Doc/Data <input type="checkbox"/>												
Equip/Tooling <input type="checkbox"/>												
Operator <input type="checkbox"/>												
Material <input type="checkbox"/>												
Setup <input type="checkbox"/>												
Other <input type="checkbox"/>												
Process <input type="checkbox"/>												
Supplier <input type="checkbox"/>												
Training <input type="checkbox"/>												
Unapproved <input type="checkbox"/>												

FAULT CATEGORY									
Landing Gear			General			Grain		Ovalized	
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain	<input type="checkbox"/> Ovalized	<input type="checkbox"/> Pressure/Forced					
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware	<input type="checkbox"/> Over/Under tolerance	<input type="checkbox"/> Temperature/Cure					
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete	<input type="checkbox"/> Part Incorrect	<input type="checkbox"/> Weld					
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear	<input type="checkbox"/> Part Lost/Missing	<input type="checkbox"/> Wrong Stock Pulled					
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance	<input type="checkbox"/> Part Moved						
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabeled	<input type="checkbox"/> Positioned Wrong						
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread	<input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Other					
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset							
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration							
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence							
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions							

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Page 2

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Start Date: 7/10/12 Start Qty: 10.00 ***10*** Cust Item ID:
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* QC Quality Control	QC6- Inspect dimensions to drawing Memo	0.00 0.00				(x10)			
130 *130* Packaging Packaging	Identify as per dwg & Stock Location: <u>080</u> Memo	0.00 0.00							
140 *140* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00							

MLJ 12/08/17
12/08/14

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data <input type="checkbox"/>									
Equip/Tooling <input type="checkbox"/>									
Operator <input type="checkbox"/>									
Material <input type="checkbox"/>									
Setup <input type="checkbox"/>									
Other <input type="checkbox"/>									
Process <input type="checkbox"/>									
Supplier <input type="checkbox"/>									
Training <input type="checkbox"/>									
Unapproved <input type="checkbox"/>									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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Picklist Print

August-02-12 11:50:19 AM

Page 1

Work Order ID: 88528

Parent Item: D3965-4

Start Date: 7/10/12

Required Date: 8/17/12

Parent Item Name: Bearing, Spherical

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP RevA: New issue DD verified by:EC
REV.B DD VERF:EC

IPP REV:B 12.03.06 AS PER DWG

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
63215K52 Bearing Spherical		Purchased	No			110	Each	0.0000	1	10		SP 12-8-13.	

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

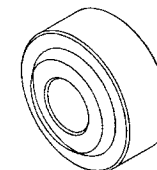
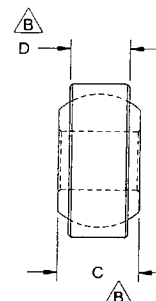
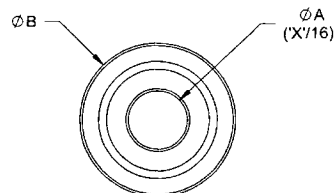
QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>						
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Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other	

SPECIFICATION CONTROL DRAWING

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 88528 MJS

12/08/09



D3965-X BEARING, SPHERICAL

WHERE 'X' IS I.D. IN 1/16" OF AN INCH
EG Ø 1/4" (4/16") I.D. BEARING = D3965-4

DART P/N	SUPPLIER	SUPPLIER P/N	A	B	C	D	STATIC RADIAL LOAD CAP. lbs
D3965-3	McMASTER-CARR	63215K31	0.188	0.563	0.281	.219	3,975
D3965-4	McMASTER-CARR	63215K52	0.250	0.656	0.344	0.250	6,040
D3965-5	McMASTER-CARR	63215K53	0.313	0.750	0.375	0.281	8,750
D3965-6	McMASTER-CARR	63215K34	0.375	0.813	0.406	0.313	10,540

RELEASED
2012-03-02

NOTES:

- 1) MATERIAL: 440C STAINLESS STEEL WITH PTFE LINER
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: N/A

B	CORRECT LETTER DESIGNATED C & D (ZN C4-1) PER PAR11-151	RF	12.01.10
A	NEW ISSUE	RF	09.07.09
REV.	DESCRIPTION	BY	DATE
DESIGN	RF		
DRAWN	RF		
CHECKED	<i>[Signature]</i>		
MFG. APPR.	<i>[Signature]</i>		
APPROVED	<i>[Signature]</i>		
DE APPR.	<i>[Signature]</i>		
DATE	12.01.10		

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. D3965	REV. B
TITLE BEARING, SPHERICAL	SHEET 1 OF 1 SCALE NTS
<small>COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD</small>	

McMaster-Carr Supply Company
200 Aurora Industrial Pkwy
Aurora, OH 44202-8087 USA
Phone: 330-995-5500 Fax: 330-995-9600
E-Mail: cle.sales@mcmaster.com
Employer Identification Number (EIN): 36-1458720

Invoice: 33983471
Purchase Order: PO17650
Release:
McMaster-Carr Number: 8201847-02

ORIGINAL COMME
INVOICE
CERTIFICATE OF

Ultimate Destination:
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Shipped: 10-Aug-2012 FOB: ORIGIN
Shipper's Export Declaration (SED):
NO EEI 30.36

Intermediate Consignee:

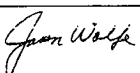
Bill To:
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Tax Number:

Forwarding Agent:

Billing
Attention:
Shipping Eric C
Attention: Dan S
Contact:

Line	Description	Qty & Unit	Unit Price	Ext
1	63215K52 Stainless Steel Ball Joint Swivel Bearing, PTFE Lined, 1/4" ID, 21/32" OD, 11/32" Ball Thick Country of Origin: Peoples Republic of China Schedule B #: 848330 ECCN #: EAR99 NLR	10 EA	\$15.62	\$156.20
2	41035T17 Portable First-Aid Case, 20-Gauge Steel, 9-1/16" X 6-5/16" X 2-3/8" Country of Origin: Mexico Schedule B #: 732690 ECCN #: EAR99 NLR	2 EA	\$17.05	\$34.10
3	3033A243 Heat-Resistant Cobalt Steel Jobbers Drill Bit, Wire Gauge 30, 2-3/4" L Overall, 1.4" Drill DP, 135DEG Point Country of Origin: United States Schedule B #: 820750 ECCN #: EAR99 NLR	24 EA	\$2.08	\$49.92
4	5529K47 Enclosed Polypropylene Automatic-Winding Hose Reel, for Hot Water, 5/8" Hose ID, 50' Length Country of Origin: United States Schedule B #: 391739 ECCN #: EAR99 NLR	1 EA	\$264.95	\$264.95
	NOTE Tracking number(s) for this shipment: 516807470577			
This transaction is subject to McMaster-Carr Supply Company's terms and conditions of sale. No other terms and conditions of sale shall apply to this transaction.				
These commodities, technology, or software were exported from the United States in accordance with Export Administration regulations. Diversion contrary to US law is prohibited.				

Shipping Weight (in kgs): 16	Number of Packages: 1	Invoice Amounts:	Merchandise Amount: \$505.00
Package Dimensions: 41 X 51 X 51 CM = .105 CUBIC M			Total (In USD): \$505.00
Payment Terms: 2% discount on merchandise only if paid within 10 days, net 30 da			
Authorized Signature: 		Remit payment to: (by wire transfer) Bank of America Illinois 231 S LaSalle Chicago, IL 60697 ABA 071000039 Account 86666-020 SWIFT BOFAUS3N	
Name: Jason Wolfe		Date: 10-Aug-2012 (by mail) McMaster-Carr Supply Company PO Box 7690 Chicago, IL 60680-7690 USA	
Title: Operations Mgr.		Page 1 of 1	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO17650

Purchase Order Date 8/10/12

PO Print Date 8/10/12

Page Number 1 of 2

Order From :

VU-MCM001

MCMaster-CARR SUPPLY CO,
P.O. BOX 7690
CHICAGO, IL 60680-7690
US

Contact Name

Vendor Phone

330 995 5500

Vendor Fax

330 995 9600

Vendor Account Nbr

Buyer

Chantal Lavoie

Requisition Nbr

Tax Resale Nbr

10127-2607

Terms

Net 10

Currency

USD

FOB

Destination-Collect

Ship To :

DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

FAXED
8/10/12

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	63215K52	Bearing Spherical	8/15/12 Yes	✓ 10.00 Each	FedEx PI collect	\$15.6200	\$156.20
			Special Inst: AS PER DWG D3965 REV. B B88528 MCMaster P/N: 63215K52				
2		41035T17 PORTABLE FIRST-AID CASES	8/15/12 Yes	✓ 4.00 Each	FedEx PI collect	\$17.0500	\$68.20
Deliver To: ERIC.C							
3		3033A243 #30 COBALT DRILL BIT	8/15/12 Yes	✓ 24.00 Each	FedEx PI collect	\$2.0800	\$49.92
Deliver To: DAN.S							
4		5529K47 REEL HOT WATE WASHDOWN	8/15/12 Yes	✓ 1.00 Each	FedEx PI collect	\$264.9500	\$264.95

No substitution or deviation without
consent.
Certificate of Conformity or Material
Certification required **YES** NO

Change Nbr: 1

Change Date: 8/10/12